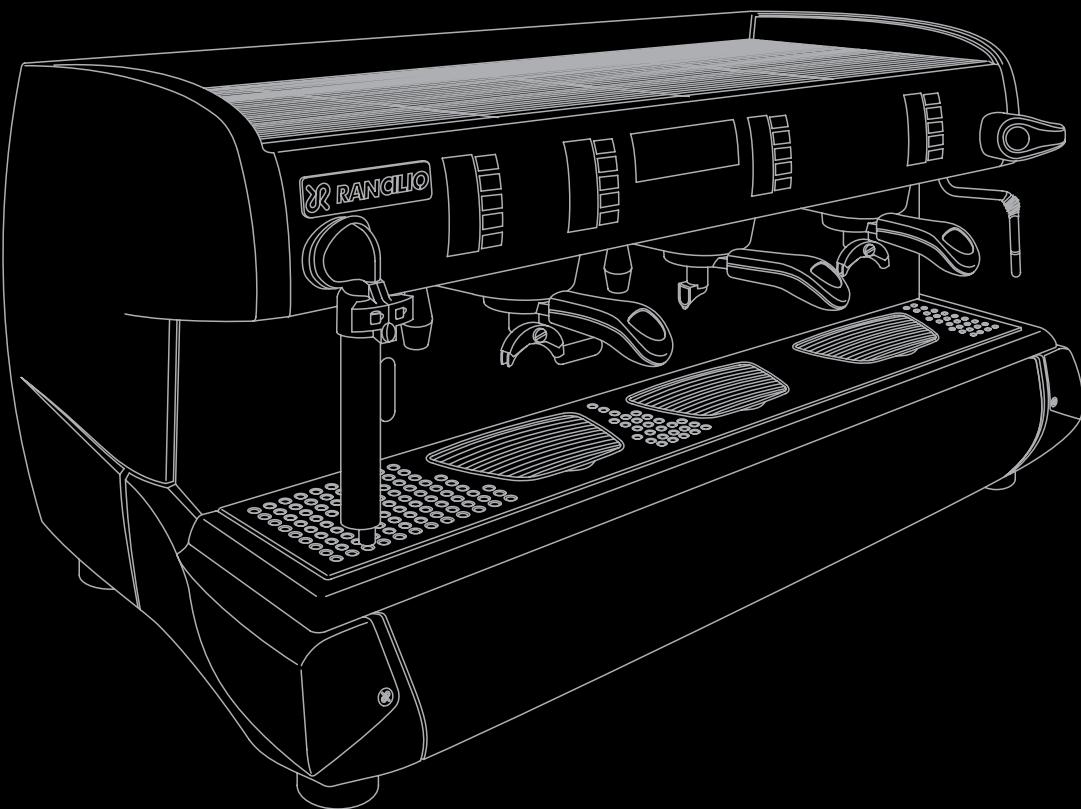


# 10 USB / S / RE



## CLASSE 10 USB / S / RE

Manuale per il tecnico  
Manuel destiné au technicien  
Handbuch für den Techniker  
Technician's Manual  
Manual para el tecnico  
Manual para o técnico



*coffeeing the World*

**IT**

Gli interventi e le procedure di programmazione indicati in questo manuale, sono di esclusiva pertinenza del tecnico installatore.

**FR**

Ce symbole indique les opérations et les procédures de programmation devant être faites exclusivement par un technicien installateur.

**DE**

Die Eingriffe und Programmierungen, die in diesem Handbuch beschrieben werden, dürfen nur von ausgebildeten Technikern durchgeführt werden.

**GB**

The interventions and the programming procedures described in this manual may only be carried out by the technician/installer.

**ES**

Las intervenciones y los procedimientos de programación indicados en este manual, están exclusivamente destinadas al técnico instalador.

**PT**

As intervenções e os procedimentos de programação indicadas neste manual são de pertinência exclusiva do técnico instalador.

IT	ITALIANO	3-12
FR	FRANCAIS	13-22
DE	DEUTSCH	23-32
<b>EN</b>	<b>ENGLISH</b>	<b>33-42</b>
ES	ESPAÑOL	43-52
PT	PORTUGUÊS	53-42

## **EN ENGLISH**

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### **CONTENTS**

<b>1.</b>	<b>Making coffee .....</b>	<b>34</b>
1.1	Number of dispensers	
1.2	Operating cycle	
<b>2.</b>	<b>Dispensing steam with the iSteam SYSTEM</b>	<b>34</b>
2.1	Renewal the milk nozzle	
<b>3.</b>	<b>Button panels .....</b>	<b>34</b>
3.1	Coffee button panel	
3.2	Function	
3.3	Programming panel	
3.4	Washing	
3.4.1	Washing of the coffee groups	
3.4.2	Cleaning iSteam	
3.5	Reset	
3.6	The timer button	
<b>4.</b>	<b>Installation Menu .....</b>	<b>36</b>
<b>5.</b>	<b>Programming .....</b>	<b>36</b>
5.1	The "Bartender" menu	
5.2	The "Technician's" Menu	
5.2.1	Setup	
5.2.1.1	Pressure adjustments	
5.2.1.2	Coffee dose programming	
5.2.1.3	Dispensing time control	
5.2.1.4	Enable programming	
5.2.1.5	International settings	
5.2.1.6	Strength reduction	
5.2.1.7	Regeneration of the filter resins	
5.2.1.8	Preventive maintenance	
5.2.1.9	Boiler sensor	
5.2.1.10	Level sensor	
5.2.1.11	Error codes log	
5.2.1.12	First-time start up	
5.2.1.13	Technical menu access block	
5.2.1.14	Software versions	
5.2.2	Counters	
5.2.2.1	Total counters	
5.2.2.2	Brew count	
5.2.2.3	Selection counter	
5.2.3	Graphics	
5.2.3.1	Logo monitoring	
5.2.3.2	Quick show	
5.2.4	iSteam	
5.2.4.1	iSteam presence	
5.2.4.2	Milk frothing	
5.2.5	Wash cycles	
5.2.5.1	Coffee wash cycle	
5.2.5.2	Wash cycle counter	
5.2.6	Data interfaces	
5.2.7	Diagnostics	
5.2.7.1	Electro valves	
5.2.7.2	Resistances	
5.2.7.3	Keys and LEDs	
5.2.7.4	Flow meters	
5.2.7.5	Level inputs	
5.2.7.6	Analogue inputs	
5.2.7.7	LCD contrast	
5.2.7.8	LCD back-lighting	
5.2.7.9	Counters	
<b>6.</b>	<b>Displaying .....</b>	<b>40</b>
6.1	Warming up phase	
6.2	Operating mode	
<b>7.</b>	<b>Operating safety devices .....</b>	<b>41</b>
<b>8.</b>	<b>The cup-warmer .....</b>	<b>41</b>
<b>9.</b>	<b>List of malfunctions .....</b>	<b>42</b>
<b>10.</b>	<b>List of warning .....</b>	<b>42</b>

## 1. MAKING COFFEE

### 1.1 Number of Dispensers

The coffee maker is equipped with 4 coffee dispensers with programmable dose and pre-brewing cycle time.

### 1.2 Operating Cycle

When one of the coffee buttons is pressed for one of the 4 dispensers, the following occurs:

- The dispensing solenoid valves are energized and the pump motor starts for a time that can be programmed between 0 and 10 sec
- The dispensing solenoid valves are de-energized and the pump motor stops for a time that can be programmed between 0 and 10 sec
- The dispensing solenoid valves are energized and the pump motor starts until the programmed impulses are reached, which start decreasing during the first phase.

## 2. DISPENSING STEAM WITH THE iSteam SYSTEM

To use this function, press the specific buttons on the button panel; it is automatically stopped when the set temperature is reached.

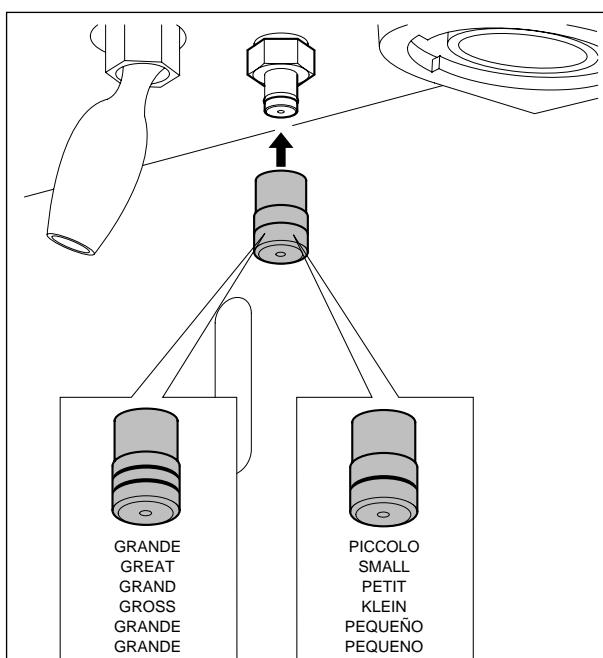
### Safety Devices

No steam can be dispensed if the machine has not reached the operating pressure or temperature at least once.

Steam dispensing is discontinued automatically after 3 minutes if the set temperature has not yet been reached.

### 2.1 Renewal the milk nozzle

To increase the quantity of frothed milk, change the standard emulsion nozzle (indicated by a notch) removing the same as indicated in the figure.

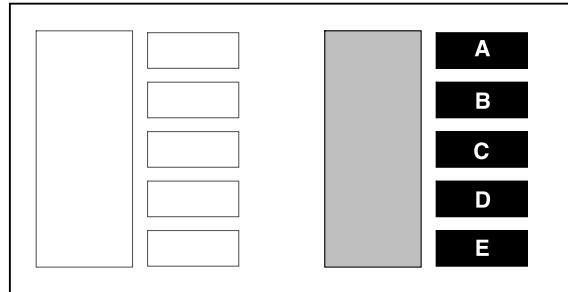


- Install the large nozzle (identified by 2 notches) to increase the quantity of whipped milk.

**Note:** iSteam nozzles are different to those utilised for the TSC

## 3. BUTTON PANELS

### 3.1 Coffee Button Panel



This panel features 5 buttons for each dispenser (max 4) and 5 LEDs consisting of the following:

4 buttons for start/stop dispensing the programmed coffee dose (**A-B-C-D**)

1 button (**E**) for:

- Stop dispensing any dose
- Start in continuous mode
- Initialize dose programming for self-learning if pressed for about 8 sec.  
(If the function is enabled)

Each time a coffee is dispensed, the LED of the relative button lights up.

During dose programming, the LED of the stop button flashes.

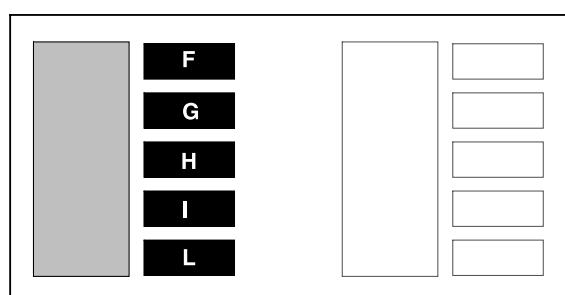
### 3.2 Function

This panel features 5 buttons and 5 LEDs consisting of the following:

1 cup-warmer button (**F**)

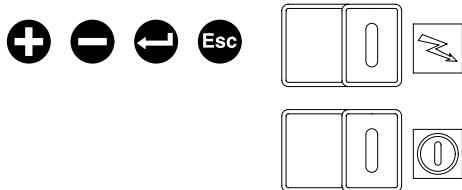
2 buttons for dispensing hot water (**G**)

3 keys for dispensing hot water blended with the temperature control function /4-TEA) (**H-I-L**)



### 3.3 Programming Panel

This panel features 4 buttons with the following functions:



Button with “+” sign

To move to a higher level in the programming menus Or to increase the value

Button with “-” sign

To move to a lower level in the programming menus Or to decrease the value

Button with “enter” sign

To enter the programming menu Or to confirm entries

Button with “esc” sign

To quit the menu Or to quit programming mode

### 3.4. Washing

#### 3.4.1. Washing of the coffee groups

At the fixed time, if the automatic washing (par.2.6) mode is enabled, a message on the display requests to wash the coffee groups.

Keep “ENTER” button pressed to start washing until the display shows:

**Coffee Cleaning Cycle**  
**Start cleaning cycle**  
**Group?**  
**press <ENTER>**

If you press “enter” within 10 seconds, the following cycle starts (if you do not leave this menu automatically):

- The display shows:

**Coffee Cleaning Cycle**  
**Insert the blind**  
**filters then**  
**press <ENTER>**

- When you press “enter”, the cleaning cycle starts and the display shows:

**Coffee Cleaning Cycle**  
**CLEANING RUNNING**

The machine carries out n. 10 cycles as follows:

- Starts dispensing from the groups for 10 sec.
- Pauses for 10 sec.

At the end of the 10 cycles, the display reads:

**Coffee Cleaning Cycle**  
**Remove the**  
**filterholders**  
**press <ENTER>**

If you press “enter” the display shows:

**RINSE RUNNING**

The machine carries out n. 2 cycles as follows:

- Starts dispensing from the groups for 30 sec.
- Pauses for 30 sec.

Keeping “esc” pressed for 2 seconds, during the cycle the current washing phase will stop and the next phase will take place.

It is advisable to always complete the rinsing cycle to remove any detergent residues.

**N.B. In the washing and rinsing phases the groups are operated alternatively.**

In any case the washing of the coffee groups can be enabled whenever necessary according to the previously described procedure.

#### 3.4.2 Cleaning iSteam

- Clean the iSteam nozzle frequently with a sponge or damp cloth. Make sure to clean the lower parts.
- Check to make sure that the sprayer is not clogged or partially clogged with crusts and residues (if a crust removal operation is necessary, be very careful not to deform or damage the sprayer)

### 3.5 Reset

Keeping pressed the key “+” and “-”, at the same time, switches on the machine, all the set data are reset onto the program, and a few standard data are automatically set (coffee dose, water dose, tank pressure, etc.)

### 3.6. Timer

The Timer buttons are used to exclude the timed switching ON and OFF of the machine.

When the timer function is selected, if the machine is OFF, press the “Esc” buttons on the programming keypad (for at least 3 second) to switch the machine ON; the machine remains ON until the next timed switching OFF or until you press the same controls again (for at least 3 seconds).

When the timer function is selected, if the machine is ON, press the “Esc” buttons on the programming keypad (for at least 3 second) to switch the machine OFF; the machine remains OFF until the next timed switching ON or until you press the same controls again (for at least 3 seconds).

## 4. INSTALLATION MENU

When the coffee machine is switched on for the first time, the following installation menu is displayed in sequence:

- Language selection
- Pressure unit
- Temperature unit
- Softner unit
- Date mode
- Clock mode
- Clock setting
- Pressure setting
- Cleaning reminder

If no changes are required, press "esc", in order to continue with installation.

## 5. PROGRAMMING

Programming is carried out on two levels, namely:

- “**Bartender**” programming
- “**Technician**” programming

### 5.1. Programming Panel

This panel features 4 buttons with the following functions:

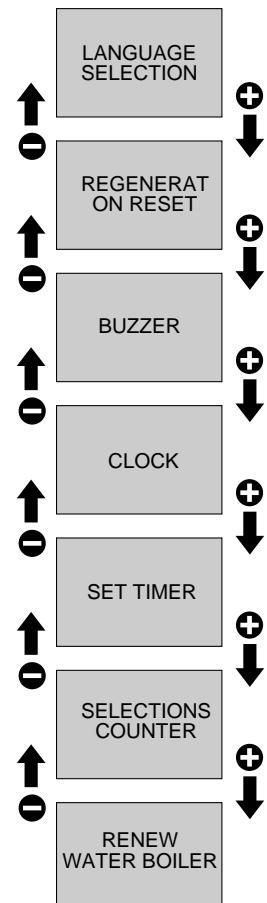
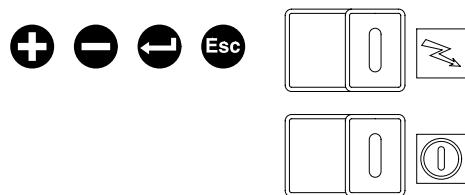
- Button with “+” sign  
to scroll through the menu items or to increase the sizes.
- Button with “-” sign  
to scroll through the menu items or to decrease the sizes.
- Button with “enter” sign  
To enter the programming menu. Or to confirm entries
- Button with “esc” sign  
To quit the menu or to quit programming mode.

When the “+” and “-“buttons are pressed for approximately 2 seconds, the “**bartender**” programming menu is activated. This menu contains the following submenus:

To move from one submenu to another, press “+” or “-“. To enter in a submenu, press “enter”, while to quit, press “esc”.

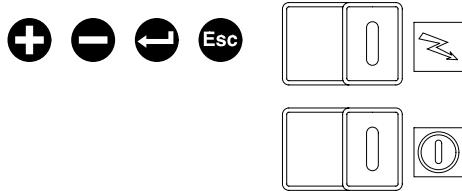
When a submenu is accessed, the editable value is displayed and changes can be made to it by pressing on the “+” or “-“ keys.

If you make changes, these must be confirmed by pressing “enter” until you quit the submenu. If you do not wish to save your changes, press “esc”.

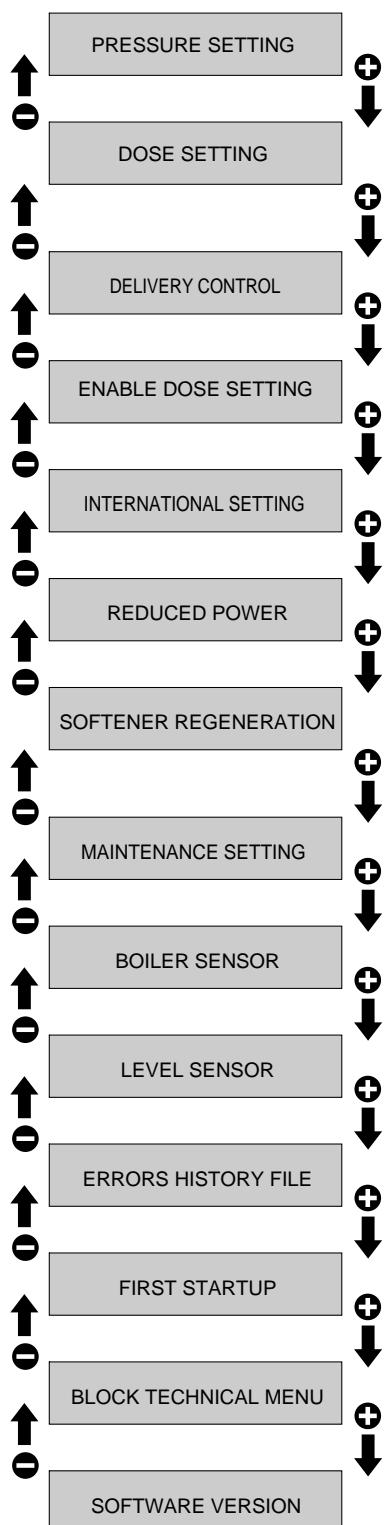


## 5.2 The “Technician’s” Menu

When the “+” and “–” buttons are pressed for approximately 4 seconds, the “technician’s” programming menu is activated. This menu contains the following submenus:



### 5.2.1. Setup



#### 5.2.1.1 Pressure adjustments

Enables adjustment of the boiler pressure from 0.60 to 1.40 bar, in 0.05 bar steps. The default pressure setting here is 1.00 bar.

#### 5.2.1.2 Coffee dose programming

To set the coffee groups and water doses:

##### ❖ COFFEE GROUP

- Number of impulses by the flow meter.
- Pre-infusion ON (time in seconds, for which the pump and coffee electro valve stay ON).
- Pre-infusion OFF (time in seconds, for which the pump and coffee electro valve stay OFF).
- Dispensing time (time in seconds used for comparison in the S.E.Q. time – ref. par. 5.2.1.3).

##### ❖ WATER GROUP

- Hot water
- Dispensing time (time in seconds for hot water dispensing).
- 4-TEA
- Water temperature (mixed, hot water temperature variation).

The default programming of the 3 “4-tea” keys provides for different water temperatures, ranging between 85°C and approx. 60°C. During dispensing, the pump is activated.

It is also possible to set a dispensing option providing cold water taken directly from the water mains line



Changing the water temperature (i.e. by acting on the thermometer), will automatically also change the dispensing time.

Setting a dispensing time of less than 3.5 seconds will only allow for selection of cold water, or of water at maximum temperature.

- Dispensing time (time in seconds for hot water dispensing).

#### 5.2.1.3 Dispensing time control

Two options are provided for time control function activation:

##### ❖ CRONO FUNCTION

Here the current dispensing time underway is shown on display.

##### ❖ .E.Q. (Standard Espresso Quality) FUNCTION

During the dose programming phase (either by auto-tuning or via the technical menu), the dispensing time is stored into the system.

This time is compared with the subsequent dispensing cycles to check whether there are any irregular dispensing cycles.

Once dispensing has ended, the following comes up on display:

- OK (if the dispensing time is comprised in  $\pm$  15% of the time stored)
- Deviation time in seconds (if the dispensing time is out of the  $\pm$  15% tolerance)

In both of these functions, the display shows progressive cup fill-up based on the impulses being dispensed.

#### 5.2.1.4 Enable programming

To enable or disable the dose programming function in auto-tuning mode (User Manual par. 9.1.1).

#### 5.2.1.5 International settings

Setting the following measure units:

- Temperature [Celsius or Fahrenheit]
- Pressure [bar or psi]
- Resin unit [French degrees/litres or Grains/Grains Gallons]

#### 5.2.1.6 Strength reduction

Enabling this function will reduce the boiler resistance strength by 2/3 of its rated capacity.

6000W 230V => 4000W 230V

4300W 230V => 2870W 230V

3200W 120V => 2130W 120V

#### 5.2.1.7 Regeneration of the filter resins

To enable the filter resins regeneration message, it is necessary to set the water mains hardness and the water treatment unit's resins volume.

If the volume is set at 0, the function is disabled.

#### 5.2.1.8 Preventive maintenance

To enable the programmed maintenance message on display, it is necessary to set the number of relative cycles (i.e. dispensing cycles) or the relative months of machine operation.

The reset function serves to deactivate the maintenance message so that it is not displayed.

#### 5.2.1.9 Boiler sensor

Setting the type of boiler pressure sensor:

- Temperature sensor
- Pressure transducer (default)

#### 5.2.1.10 Level sensor

Sets the type of boiler water level sensor:

- Level indicator rod
- Capacitive board (default)

#### 5.2.1.11 Error codes log

Display of the machine error logs (ref. par. 9). Displays the error code, with relative date and time.

#### 5.2.1.12 First-time start up

Setting, at coffee machine first-time start up, of the machine's configuration menu (ref. par. 4). Any first-time start up data set previously, remain stored into the system.

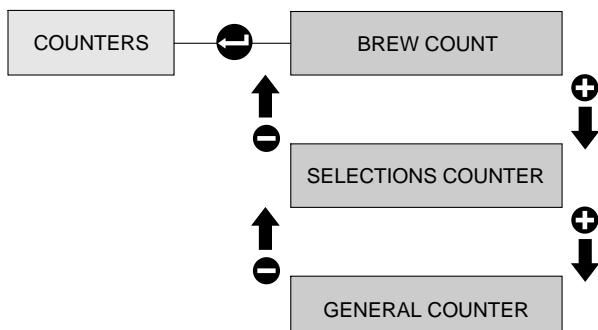
#### 5.2.1.13 Technical menu access block

Provides the option of blocking access to the technical menu via password "1927".

#### 5.2.1.14 Software versions

Displays the software versions installed into the machine.

### 5.2.2 Counters



#### 5.2.2.1 Brew count

By enabling the output counting, the counter would account for the coffees output by multiplying by 2 the output started with the 2-coffee keys, and counting also the interrupted outputs.

The 5<sup>th</sup> key onto the coffee keyboards does not start any output continuously, but it works as Stop only.

By disabling the counting, any single key is accounted for, and the 5<sup>th</sup> key operates as Start/Stop only.

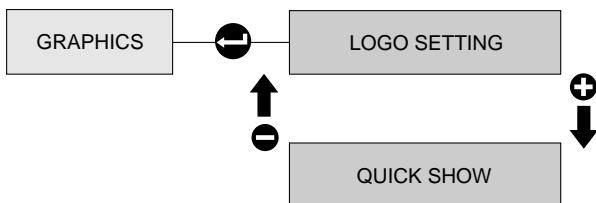
#### 5.2.2.2 Selection counter

This displays the counters for each coffee group, the water group, the iSteam group and the total of the counters. It also asks you whether you wish to reset the counters or not. Even if you reset these counters, the totals continue to increase.

### 5.2.2.3 Total counters

Displays the total number of counters available for each coffee group, for the water group and for the iSteam group, plus the total summary thereof.

### 5.2.3 Graphics



#### 5.2.3.1 Logo monitoring

Provides for setting of the following features:

- Logos ON/OFF selection
- Logo display sequence
- Logo display time (for the "Loop" logo, this setting amounts to the display time of one single screen page)

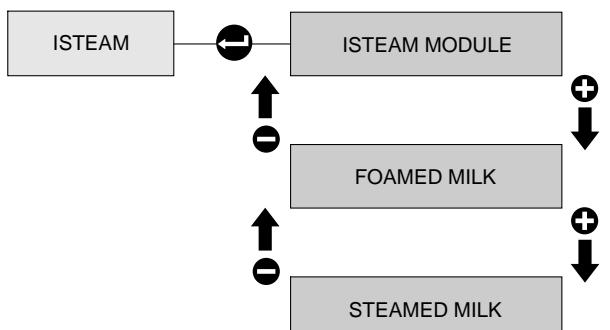
#### 5.2.3.2 Quick show

Enabling this function enables continuous viewing of the display logos.

It is possible to interrupt display of logos in the event of:

- Coffee dispensing
- Hot water/4-TEA dispensing
- iSteam dispensing

### 5.2.4 iSteam



#### 5.2.4.1 iSteam presence

Provides for setting of iSteam presence in the machine.

#### 5.2.4.2 Milk frothing

Setting of the milk's final temperature and emulsion grade, on a scale from "0" to "MAX".

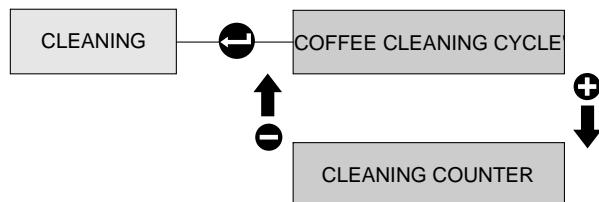
If set at level "0", the milk is only heated. Increasing the emulsion level will increase the milk frothing grade. The default setting here is the "MAX" level.

### 5.2.4.2 No milk frothing

Setting of the milk's final temperature and emulsion grade, on a scale from "0" to "MAX".

If set at level "0", the milk is only heated. Increasing the emulsion level will increase the milk frothing grade. The default setting here is the "0" level.

### 5.2.5 Wash cycles



#### 5.2.5.1 Coffee wash cycle

Setting of the automatic daily washing cycle. Here it is also possible to set the coffee dispensing block function, if the coffee group wash cycle is not performed within one hour from the appearance, on display, of the relative wash cycle message.

#### 5.2.5.2 Wash cycle counter

Displays the number of coffee wash cycles that have been performed.

### 5.2.6 Data interfaces

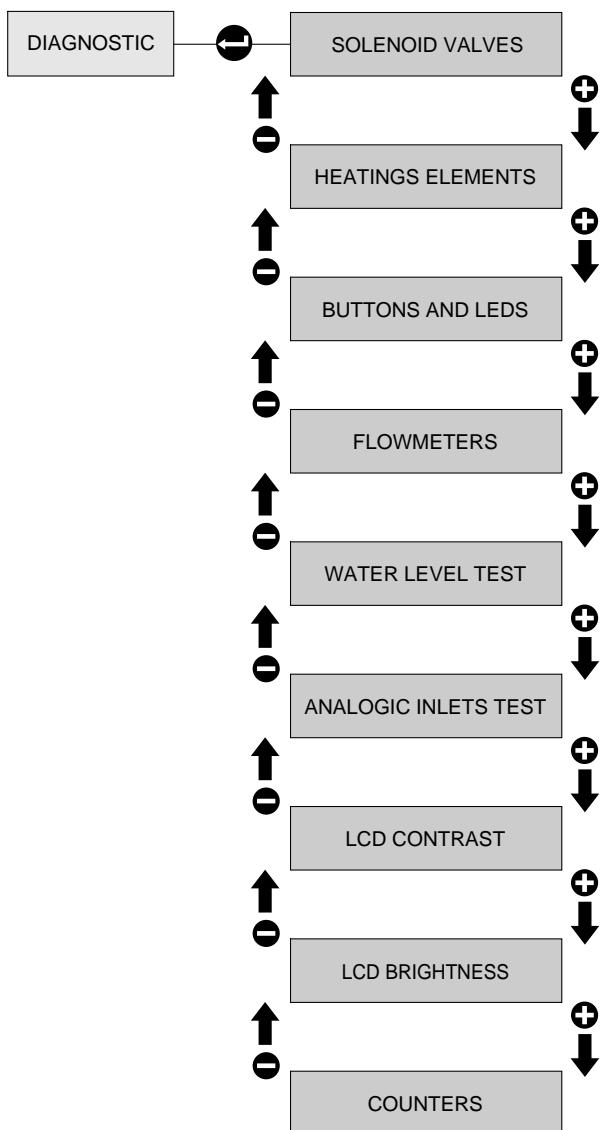


Setting of the Rancilio IDS (Interface Data System) for data interfacing.

It is possible to set either the DEBIT operating function (data discharge only) or the CREDIT operating function (with dispensing enabled via the cashbox system).

In the event that this function is enabled without the interface, the machine will go into block mode.

## 5.2.7 Diagnostics



### 5.2.7.1 Electro valves

Provides the option of individual activation of each single electro valve.

From this menu, it is also possible to activate the pump.

### 5.2.7.2 Resistances

Provides the option of individual activation of each single boiler resistance element.

Also provides the option of activating the cup warmer resistance.

### 5.2.7.3 Keys and LEDs

Provides the option of individual activation of each key and the relative LED.

### 5.2.7.4 Flow meters

Provides instant reading option of each single flow meter, individually.

### 5.2.7.5 Level inputs

Selecting the type of boiler water level sensor installed, it is possible to view the status of the boiler water level:

- OFF (level not reached)
- ON (level OK)

### 5.2.7.6 Analogue inputs

Provide for instant viewing of the real-time bit values detected by the probes.

### 5.2.7.7 LCD contrast

Shows the display contrast level.

### 5.2.7.8 LCD back-lighting

Shows the display back-lighting level.

### 5.2.7.9 Counters

Display of the following values:

- Number of pump-cycle activations.
- Total pump-operation time (in hours).
- Number of inlet cycle electro valve activations.
- Total quantity of water, expressed in litres, used by the coffee machine.
- Litres missing to the next resin regeneration cycle (if function ref. 5.2.1.7 is activated).

## 6. DISPLAYING

### 6.1. Warming Up Phase

During the warming up phase, the following message is displayed:

**"Machine not ready"**

Until the set pressure is reached.



The following messages are also displayed, concerning:

**"Please make the regenerate softener"**, if the function is enabled and the set values have been reached (this message will be then repeated every hour until it is reset)

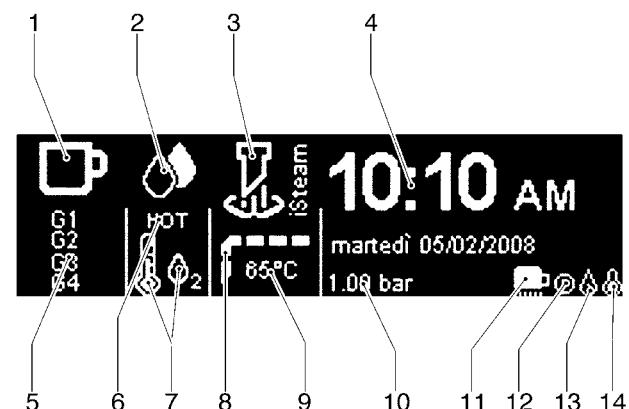
**"Please make the service time"**, if the function is enabled and the set values have been reached (this message will be then repeated every hour until it is reset)

## 6.2. Operating mode

Once the temperature/pressure is reached, the date, the current time and the pressure data will stay on display (for 20 sec.) and flash alternatively to the customisation logos.

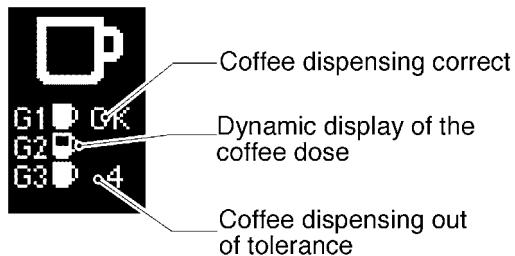


During dispensing, the following is displayed:



- |    |                                    |
|----|------------------------------------|
| 1  | Coffee dispensing symbol           |
| 2  | Hot water dispensing symbol        |
| 3  | iSteam dispensing symbol           |
| 4  | Date and time                      |
| 5  | Selected coffee dispensing group   |
| 6  | Hot water dispensing               |
| 7  | Type of hot water blending (4-TEA) |
| 8  | Milk warm-up display               |
| 9  | Milk instant-temperature           |
| 10 | Boiler pressure                    |
| 11 | Cup heater symbol                  |
| 12 | Set-time symbol                    |
| 13 | Water charge symbol                |
| 14 | Boiler resistance ON symbol        |

If one of the two time/doses control functions are activated, the coffee symbol space will instead display:



otherwise:

**“Brewing time”**

For energy saving purposes, the display will reduce its luminosity after one hour of continuous inactivity without dispensing anything. After two hours of continuous inactivity without dispensing anything, it will switch itself off altogether.

## 7. OPERATING SAFETY DEVICES

When the coffee maker is switched ON, it checks whether there is enough water in the boiler.

**7.1.** If the water level is inadequate, the machine tops up the level automatically. If this does not take place within a set period, the boiler filling operation is discontinued and a warning message is displayed:

**“G01 Water missing”**

**7.2.** If the water presence check result is positive, the boiler heating resistances are enabled.

If the set pressure is not reached within a specific time, the power supply to the heating resistances is cut off and a warning message is shown on the display:

**“G02 Boiler Pressure low”**

**7.3.** If the safety device for slow dispensing intervenes, the LED of the dispensing button must flash until the end of dispensing.

The boiler safety devices can be reset by switching the machine OFF and then back ON again

## 8. THE CUP-WARMER

By pressing the relative button, the display shows the following:



Depending on the darkened segments it indicates the selected power status of the cup-warmer resistances (min – med – max – off).

passing from one level to the next is performed by pressing on the cup-warmer key.

## 9. LIST OF MALFUNCTIONS

The system electronics are capable of diagnosing the following failures by displaying the relative error codes on screen:  
Because they are serious, these errors will stop and block machine operations.

- G00 Check CPU
- G01 Water missing
- G02 Boiler Pressure low
- G03 Boiler probe shorted
- G04 Interrupted boiler probe
- G05 Connection IDS
- G06 Regen. softener
- G07 Maintenance
- G08 Cleaning interrupted
- G09 24V Group 1 shorted
- G10 24V Group 2 shorted
- G11 24V Group 3 shorted
- G12 24V Group 4 shorted
- G13 24V Func. Group shorted
- G14 12V Capacitive level shorted
- G15 12V Transducer shorted
- G16 2V Flowmeter shorted
- G17 5V ext shorted
- G18 12V sk power shorted

Failures G06-7-8- will not block the machine functions and are displayed on the error codes log..

- W23 Interr. EV cold 4-TEA
- W24 EV hot 4-TEA shorted
- W25 Interr. EV hot 4-TEA
- W26 EV steam iSteam shorted
- W27 Interr. EV steam iSteam
- W30 EV air iSteam shorted
- W31 Interr. EV air iSteam
- W32 Check the message file
- W33 Check USB

## 10. LIST OF WARNING

The system electronics are capable of diagnosing the following failures by displaying the relative error code on screen (which will come flashing on alternatively to the customisation logos).

Because they are not serious, these errors will allow the machine to keep running.

We nevertheless recommend that you contact the Technical Service Department in order to settle the problem as quickly as possible.

- W01 Interr. flowmeter Group 1
- W02 Interr. flowmeter Group 2
- W03 Interr. flowmeter Group 3
- W04 Interr. flowmeter Group 4
- W05 iSteam probe shorted
- W06 Interr. iSteam probe
- W07 Check data
- W08 Maintenance
- W09 Water softener
- W10 Run the coffee cleaning cycle
- W11 Check the clock
- W12 EV Group 1 shorted
- W13 Interr. EV Group 1
- W14 EV Group 2 shorted
- W15 Interr. EV Group 2
- W16 EV Group 3 shorted
- W17 EV Group 4 shorted
- W18 EV Autofill shorted
- W19 Interr. EV Autofill
- W20 EV Hot water shorted
- W21 Interr. EV Hot water
- W22 EV cold 4-TEA shorted

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